

DAC#  
[Signature]

**Director of the United States Patent and Trademark Office**

Dear Sir :

**PETITION**

Under §1.137(a)

The applicant herewith petitions the Director of the United States Patent and Trademark Office for the revival of abandoned application caused by late reply to the Office action dated April 18, 2005 for 20 days from May 18, 2005 to maximum Jun10, 2005. Submitted herewith is a check for US\$250.00 to revival cost of the unavoidably abandoned application.

Application NO.	FILING DATE	FIRST NAMED INVENTOR	ART UNIT
10/603,854	06/26/2003	Tadashi Umeda	2835

Attached:

- (1) The reply required to the outstanding Office action which is not filed.

The initial reply is enclosed in the initial envelope as it was to show that I have not added or withdrawn any contents for my own interests.

- (2) The petition fee as set forth in §1.17(l); Check of US\$250.00

- (3) A showing to the satisfaction of the Director.

Submitted in the next page.

With three evidences

Evidence 1:

Initial reply in the envelope which is still originally sealed

The name of person who refused delivery is written.

As well as the original AWB still stucked.

Evidence 2:

Package Tracking Results

Down loaded from DHL's home page and printed out.

Evidence 3:

DHL's letter

Provided by DHL Japan.

06/01/2005 JBALINAN 00000071 10603854

01 FC:2452

250.00 OP

*Tadashi Umeda*

Tadashi Umeda / May 26,2005

Applicant and Inventor



Director of U.S Patent and Trademark Office

Petition's showing for revival from abandonment /Appl.No. 10/603,854  
Under §1.137(a)-(4)

I am an inventor and an applicant as a small entity of this application..

Concerning to the first amendment, the Office Action dated April 18, 2005 issued and arrived at my home in the afternoon of May 2, 2005.

The action requested my reply within one month from the date of April 18.

This means 14 days had already lapsed away for the given 30days when I was handed the action.

I could not find the reason for its unusual delay.

I tried to provide the reply to comply with the Office Action at my best.

I finally completed it on May 11. There were only 6 days left and I had to investigate the quickest and most reliable transporting method between the courier service and EMS of Japanese Postal service.

DHL courier service is known who conveys cargo to any city of U.S.A..by 2 days.

While Japanese Postal service told it takes 4 days plus custom clearing periods which would be 5 days or so in total which means DHL looked to be safer though mailing charge is almost 4 times of Japanese Postal service.

Then I had to send it by DHL .And I rushed into the counter of DHL service.

I carefully filled up air way bill's form not to write P.O.Box clearly because of DHL's notice, while I had to remain it in fear of being missing..

Therefore I made a parenthesized around the P.O.Box. (Evidence 1: Original air way bill on the envelope)

For the first time, everything appeared to be smooth when I confirmed it on monitor page through my ADSL.. But situation became strange after May 12, 2005 11:18 when the delivery was refused by the recipient. (Evidence 2: DHL's Package Tracking Results )

I asked the reason of refusal by recipient. And I was informed that might be caused by the receiver's attention and phone number written in the bottom line. Then I requested DHL Japan to erase them . (Actually these were not erased yet.)

I asked on Saturday May 14. to DHL Japan to try the delivery again.. And May 17 DHL USA tried to deliver it for me, but in vain, it was refused again. Being informed this situation, on this same day

May 17, I asked DHL to erase P.O.Box, but this is not accepted by DHL U.S.A .even though it is parenthesized. Then the time limit of May 17 was over.

If I were given another 3 days I could send it through Japanese Postal Service. Then I could be filed through P.O.Box directly though I had dropped to write "Mail stop\_\_\_\_\_".

Or I could have communicated with DHL U.S.A about correction of the address in order to try it again and again . But inavoidably I wasn't given enough period left when I received Office action already.

I also wish oversea applicant were also given such a beneficial practice applied for applicant who uses USPS Express mail. As written in§37 CFR 1.10 (a)(1) the date of deposit is considered to be a filed date.

I have to mention how my reply was handled.

Enclosed please find the letter of DHL Japan for the evidence herewith. (Evidence 3)

It says on May 12 (Thu) my reply was refused to receive by a person named "Mr. Brooks" without telling any explanation.

And more than that, on May 17(Tue) a person named "Mr. Barfield" refused to receive without telling any explanation. May 17 was the final day for submission.

Nevertheless, I still understand U.S.Patent Office is open minded and amicable towards the inventors of the world, which I read in Japanese books, and I would hope keeping this impression.

I hereby apology my delay for reply to the Office Action  
and sincerely petition for Revival of abandoned application by law§1.137 (a).

Tadashi Umeda

Tadashi Umeda (2005/05/26)

Applicant and Inventor



## These are the results of your query

Times given are local to the service area in which the shipment checkpoint is recorded

Airwaybill Number	Origin Service Area	Destination Service Area	Status
<u>2226785385</u>	<u>Tokyo - Japan</u>	<u>Alexandria - USA</u>	Scheduled for delivery as of: May 17, 2005 17:19

## 2226785385 - Detailed Report

Date	Time	Location Service Area	Checkpoint Details
May 11, 2005	14:09	Tokyo - Japan	Shipment picked up
May 11, 2005	18:49	Tokyo - Japan	Departed from DHL facility in Tokyo - Japan
May 11, 2005	19:19	Tokyo - Japan	Arrived at DHL facility in Tokyo - Japan
May 11, 2005	21:19	Tokyo - Japan	Departed from DHL facility in Tokyo - Japan
May 12, 2005	00:28	Cincinnati, OH - USA	Arrived at DHL facility in Cincinnati, OH - USA
May 12, 2005	03:56	Cincinnati, OH - USA	Transferred through Cincinnati, OH - USA
May 12, 2005	07:26	Alexandria - USA	Scheduled for delivery
May 12, 2005	08:20	Alexandria - USA	With delivery courier
May 12, 2005	11:18	Alexandria - USA	Recipient refused delivery
May 12, 2005	17:22	Alexandria - USA	Scheduled for delivery
May 17, 2005	15:47	Alexandria - USA	Recipient refused delivery
May 17, 2005	17:19	Alexandria - USA	Scheduled for delivery

**Evidence 2**

# EVIDENCE 3



2005/05/25

TO: MR.TADASHI UMEDA  
FROM: KENTARO FUJITA/DHL JAPAN INC.

Dear Sir,

I am writing with regard to your shipment from Tokyo /Japan to under A WB number 2226785385 & 9253358564.  
First of all, we'd like to express our deep apology since we could not comply with your request, and could not deliver this shipment to the address we were advised:

////////////////////////////////////  
United States Patent and Trade Mark Office  
ATN: Commissioner For Patents (PO Box 1450)  
Alexandria VA  
22313-1450 U.S.A.  
(contact person) LIE dept. (phone/fax) 571-272-1554  
////////////////////////////////////


DHL Japan received this order on May 11<sup>th</sup> (Wed), and it was forwarded to Virginia/U.S.A.  
The first delivery was arranged on May 12<sup>th</sup> (Thu), however, it was refused by a person Named "J Brooks "from United State Patent and Trademark Office.

We then got request from Mr.Umeda to check up the status of this shipment on May 14<sup>th</sup> (Sat).  
We received a reply from local DHL office in the States saying the consignee didn't receive this shipment with the given receivers attention and telephone number.  
It was May 17<sup>th</sup> (TUE) since the local office is closed during weekend.

The local DHL office arranged another delivery on May 17<sup>th</sup> (Tue), but again a person named "P Barfield" refused this shipment.

We modified the consignee's details as we are advised by Mr.Umeda, and had local DHL office to arrange another delivery, but DHL U.S.A turned down our request since they do not deliver to the P.O.Box.  
The revised delivery address is as shown below:

////////////////////////////////////  
UNITED STATES DEPARTMENT OF COMMERCE  
U.S.Patent and Trademark Office  
COMMISSIONER FOR PATENTS  
P.O.BOX 1450  
Alexandria, Virginia 22313-1450  
////////////////////////////////////

Deutsche Post  World Net  
MAIL EXPRESS LOGISTICS FINANCE

002/2002

2005 05/25 \* 19:26 FAX 03 3522 2559 DHLJapan Inc



DHL Japan & DHL U.S.A. closely communicated to decide how to handle this order knowing the urgency of this shipment.  
Nevertheless, DHL U.S.A. did not compromise, and insisted not to deliver this shipment to the given P.O.Box since this is DHL's group policy.

Finally we decided to return this shipment to the origin, and ask Mr.Umeda to send the paper work to United States Patent and Trade Mark Office using different mean.

Please understand that we really wanted to add more details regarding delivery status, however, the assigned driver could not recall clearly.  
Moreover, DHL can not provide our customers with shipping history saved in our system since they are confidential data.

It was very much regrettable, if DHL did not have a policy to prohibit delivery to P.O.Box, this shipment would be posted the given P.O.Box by due date.  
I hope you kindly accept our deep apology.

Sincerely Yours  
Kentaro Fujita



Attention Legal Instruments Examiner(LIE)

Dear sirs:

May 11, 2005

Re.:Reply to the Office Communication posted on 04/18/2005  
Appl.No. 10/603,854

Enclosed please find one copy of corrected section of non-compliant amendment document herewith.

They are

- |                    |         |
|--------------------|---------|
| 1) Claim section   | 7 pages |
| 2) Drawing section | 8 pages |

Tadashi Umeda  
**Tadashi Umeda**

Adress: 2-11-3, Matsudo-cho,  
Hitachinaka city  
Ibaraki prefecture  
Japan  
postal code 312-0016



Attention Legal Instruments Examiner (LIE):

**Re. Annotated claim sheet**

Dear Sir:

May 11,2005

1) The prior application was rejected by the initial examination: "because the claimed recitation of a use (i.e. the use of the shock waves or avoiding arc), without setting forth any steps involved in the process, ". I clearly understood what was requested and then tried to rewrite all of the claims in order to include actual manufacturing steps of the fuse.

These manufacturing steps like providing two halves of the enclosure or adhesively assembling them into one are quite common among the fuse manufacturers.

These sentences could be deleted if they are considered to be any added new matters, because they are not the core portion of the invention, but only for the better understandings of the invention.

2) The procedure of the office action requests "currently amended claims shall be presented with markings to indicate the changes that have been made relative to the immediate prior version." It is however hard to coincidentally describe them with markings because the currently amended claims are rewritten to clear the requirements by 35USC 112 shown in the initial examination.

Instead of marking individually, then I put them in order in the comparison Table so as to clarify that the current amendment does not include any technological new subject added by this rewriting. I would be examined my claims by the individual technological matters shown in the table, though I attached on the page 5 – 7 of this issue " the claim listing" complying to the requirements of 37CFR1.121.

Best regards

*Tadashi Umeda*

Tadashi Umeda



Annotated Claim Sheet

Claim No.	Currently amended claim	Relation to immediate prior version	Annotation
Claim 1	<p>"A fuse assembly comprising:  a an electric insulator:</p>	<p>&lt;Brief description of the Drawings&gt;  reference numeral 1</p>	<p><u>Equal</u></p>
	<p>composed of two halves of length-wisely sliced body to be adhesively assembled into one enclosure</p>	<p>Explanations were skipped.</p>	<p>As requested by office action, added so as to set forth some steps involved in the process which is common among the fuse manufacturers.</p>
	<p>Having an inner wall consist of two jointed ellipsoidal concave inner walls, which are so arranged as to superimpose two focuses of each ellipsoid into one, and</p>	<p>&lt;Claim1&gt;  The "internal concave wall of the body comprising paraboroidal concave wall, spheroidal concave wall, hyperboloidal concave wall or other concave walls and <u>polyhedral concave walls</u>"</p>	<p>*<u>deleted</u> "paraboloidal concave"  *<u>deleted</u> "hyperboloidal concave"  *"<u>spheloidal concave</u>" is <u>equal</u> to "<u>ellipsoidal concave</u>"  *I <u>mistook</u> to include "polyhedral concave" wall. But hopefully I could be accepted to return to the next amendment, since I showed it in Fig.7 and Fig.8.</p>
	<p>Having a shock wave generated by arcing of fuse element caused by over current introduced into fuse assembly at its mid length which correspond to the superimposed focuses, reflect converge and place a focus onto the another focuses respectively to extinguish an arc of the element at both focuses:</p>	<p>&lt;Claim 1&gt;  "using the shock wave generated by the arc discharge,...,converge and reflect the shock wave onto the prolonged arc point."</p>	<p><u>Equal</u></p>

	b.electric conductors; clamped on the edge of said sliced body; c.a fuse element; spanned between said terminals and fixed with solder."	<Brief description of the drawings> reference numeral 2 <Brief description of the Drwaings> reference numeral 3, 4 and 8 as element and solder	<u>Equal</u>  <u>Equal</u>
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Claim No.	Currently amended claim	Relation to immediate prior version	Annotation
Claim 2	A fuse assembly, comprising: a. an electric insulator tube;	<Claim 2> · non conducting body <Brief description of the Drwaings> · Reference numeral 1 as "Electric insulator"	<u>Equal</u>
	b. an electric conductive ferrule; having a <u>paraboloidal</u> or <u>hyperbolic</u> concaved inner wall which has a shock wave generated by arcing of fuse element caused by overcurrent introduced into fuse assembly reflect, converge and place a focus onto the arcing spot of the element	<Claim 2> · comprising conductors wherein "inner wall of the conductors or/and fuse body forms the concave which converge and reflect the shock wave generated by the arc discharge to make the focus onto the prolonged arc." <Description of the second preferred embodiment>	"hyperbolic concaved inner wall" is added which could be deleted if this is considered to be a new matter.

	the paraboloidal reflection wall	
and adhesively assembled with said electric insulator tube,	Explanations were skipped.	As requested by office action, added so as to set forth some steps involved in the process which is common among the fuse manufacturers.
c. fuse element; spanned between said ferrules and fixed with solder	comprising fusible element	Equal
d. sand grain; preferably filled as filler material in the space where said element is spanned.	<description of the second preferred embodiment> "the fuse is filled with filler material like granular quartz 7"	Equal

Claim listing

Prior claims

~~CLAIMS~~

~~1 Method of avoiding arc prolongation while interrupting the current, using the shock wave generated by the arc discharge, including the internal concave wall of the body, comprising paraboloidal concave wall, spheroidal concave wall, hyperboloidal concave wall or other concave walls and polyhedral walls which converge and reflect the shock wave onto the prolonged arc point.~~

~~2 Method of forming a cartridge current fuse, comprising conductors, fusible element which is electrically connected to conductors, and noneconductive body wherein inner wall of the conductors or/and fuse body forms the concave which converge and reflect the shock wave generated by the arc discharge to make the focus onto the prolonged arc.~~

Currently Amended claims

What is claimed is:

Claim 1. (currently amended)

~~1 Method of avoiding arc prolongation while interrupting the current, using the shock wave generated by the arc discharge, including the internal concave wall of the body, comprising paraboloidal concave wall, spheroidal concave wall, hyperboloidal concave wall or other concave walls and polyhedral walls which converge and reflect the shock wave onto the prolonged arc point.~~

A fuse assembly, comprising:

a. an electric insulator;

composed of two halves of length-wisely sliced body to be adhesively assembled into one enclosure,

having an inner wall consist of two jointed ellipsoidal concave inner walls, or ellipsoidally segmented polyhedral concave inner walls, which are so arranged as to superimpose two focuses of each ellipsoid into one , and

having a shock wave generated by arcing of fuse element caused by over current introduced into fuse assembly at its mid length which correspond to the superimposed focuses, reflect, converge and place a focus onto the another focuses respectively to extinguish an arc of the element at both focuses;

b.electric conductors; clamped on the edge of said sliced body;

c. a fuse element; spanned between said terminals and fixed with solder.

Claim 2.(currently amended)

~~Method of forming a cartridge current fuse, comprising conductors, fusible element which is electrically connected to conductors, and nonconductive body wherein inner wall of the conductors or/and fuse body forms the concave which converge and reflect the shock wave generated by the arc discharge to make the focus onto the prolonged arc.~~

A fuse assembly, comprising:

a. an electric insulator tube;

b. an electric conductive ferrule;

having a paraboloidal or hyperbolic concaved inner wall

- which has a shock wave generated by arcing of fuse element caused by over current introduced into fuse assembly reflect, converge and place a focus onto the arcing spot of the element and adhesively assembled with said electric insulator tube,
- c. fuse element; spanned between said ferrules and fixed with solder; and
  - d. sand grain; preferably filled as filler material in the space where said element is spanned.